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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/598,457	02/08/1996	JAMES E. CURRY	414.013	8452
32127	7590	11/04/2003		
VERIZON CORPORATE SERVICES GROUP INC. C/O CHRISTIAN R. ANDERSON 600 HIDDEN RIDGE DRIVE MAILCODE HQEO3HO1 IRVING, TX 75038				
			EXAMINER MEI, XU	
			ART UNIT 2644	PAPER NUMBER 37
DATE MAILED: 11/04/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
08/598,457

Applicant(s)
Curry et al.

Examiner
Xu Mei

Art Unit
2644



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Aug 8, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

1. This communication is responsive to the applicant's Response dated 08/08/2003.

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Begault in view of the Lowe et al ('799), Lowe et al ('975), and Lowe et al ('462) combination (hereinafter, Lowes').

Regarding claims 1-9, 12, 15-18, and 24-26, Begault discloses a computer workstation with 3-D audio for use by a plurality of participants/conferees in teleconferencing environment (spatial audio teleconferencing). Fig. 5.12 on page 215 shows a layout of a conferee with the computer workstation that is inherently including coupling means (conference

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transmission system) for coupling the apparatus to transmission lines from a far-end conferees located remotely from the conferee (i.e., multiconversation teleconferencing) and with compression unit and decompression unit providing A/V signals compression and decompression at the transmitting end and receiving end of the conference transmission lines, the coupling means including a plurality of ports, each one for receiving audio sound signals from a respective one of the far-end conferees, the conferee being provided with a headphone for receiving spatialized audio signal and to detect direction of origin of a teleconference speaker and route that voice to a speaker of channel in a manner to spatially locate such voice (i.e., virtual sound location) (Begault, pages 213-216). And the computer conference workstation as shown by Begault are generally including video camera for video image capturing, and microphones and loudspeakers for receiving and reproducing audio signals for the respective conferees at the far-end and the near-end.

The Lowes' combinations are techniques for provide such a system for localizing various receiving actual sound signals via signal transmission lines (i.e., wire) and imparting phase variation to such signals (i.e., signals received from each of the conferee ports) to simulate spatial effects (HRTF). It would

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have been obvious to utilize the Lowes' combination in the teleconferencing environment of Begault to actually create a far better localization of audio signals for the conferee with simple amplitude panning. And each of the conferees (at the far-end or near-end) would have a much improved localizing sound system for identifying others in the teleconference because of the better sound localization. Furthermore, the improved teleconference apparatus as taught by the combinations above would have altering or allocating the audio conference signals by of each participant for the entire duration of the teleconference when the improved apparatus is in used. And in Fig. 6 of Lowe'462 shows the dummy head with spatially disposed microphone as claimed (claim 5) and head track sensor for HRTF as described in Lowe'799 (claim 8). The HRTF unit of the Lowe can be considered as a spatial sound conference bridge as it is being modified for use in the video conference environment.

Regarding claims 10-11, the specific placement of the video camera for improving and desired image capturing, and personal head mounted display are old and well known in the art. It would have been obvious to one of ordinary skill in the art to mount a video camera at a certain desired position for improving and

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desired image capturing and utilizes the well known head mounted display during personal video conference.

Claims 13-14, 19-21, 22-23, and 27 are similar to various claims of claims 1-12, 15-18, 24-26 except for being couched in method terminology; such methods would be inherent when the structure is shown in the references.

Response to Arguments

4. Applicant's arguments filed 8/8/2003 have been fully considered but they are not persuasive.

Applicant's arguments regarding Begault "provides no more than a discussion of desired functionality with no description of how such functionality may be achieved" fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The virtual space auditory arrangement disclosed by Begault clearly shows the functionality of using computer workstation for conference as stated in the rejection above.

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In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation for combining Begault and the Lowes' combination in a teleconferencing environment to actually create a far better localization of audio signals for

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the conferee with simple amplitude panning. And each of the conferees (at the far-end or near-end) would have a much improved localizing sound system for identifying others in the teleconference because of the better sound localization. Furthermore, the improved teleconference apparatus as taught by the combinations above would have altering or allocating the audio conference signals by of each participant for the entire duration of the teleconference when the improved apparatus is in used; and this motivation is clearly stated in the previous rejection and considered within knowledge of one of ordinary skill in the art.

In response to applicant's argument regarding the "right and left spatially disposed microphones" is not part of the Lowe device is considered, however, the examiner disagrees. Lowe'462 shows in Figs. 6, 7 and 12 by using right and left spatially disposed microphones for receiving and generating stereophonic signals for processing of virtual playback (see also col. 7, line 46-col. 8, line 4). This shows the right and left spatially disposed microphones are clearly part of the Lowe's device and the right and left received signals are being used for processing generating virtual stereo playback.

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As these are the totality of arguments presented, and they have been found unpersuasive, the existing rejection is deemed appropriate.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. **Any response to this final action should be mailed to:**

Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).


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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 703-308-6610. The examiner can normally be reached on Monday-Friday (9:30-6:00), alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.


Xu Mei
Primary Examiner
Art Unit 2644
10/29/2003